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AGEING POPULATION AND ITS IMPLICATIONS FOR URBAN PLANNING IN SURABAYA CITY

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Abstract: *Surabaya is inevitably influenced by the global trend of an ageing population; thus, policymakers need to integrate this factor into the city's future planning. This research seeks to outline the forthcoming elderly demographic and suggest strategies that correspond with this emerging trend. This research employs a dual methodology, integrating numerical data analysis with descriptive insights. The methodology utilizes the cohort component projection approach alongside content analysis. Data was obtained through secondary surveys by extracting data from existing literature. The results indicate that by 2050, there will be a significant rise in the elderly demographic, which will directly impact the old-age dependency ratio, necessitating proactive measures to address this concern. The Surabaya City Government can pursue initiatives aligned with the Age-Friendly City concept, though enhancements across various dimensions of this framework are necessary beforehand.*

Keywords: *Cohort Component Projection, Ageing Population, and Age-Friendly City.*

Abstrak: Surabaya tidak dapat lepas dari fenomena ageing population yang terjadi secara mendunia sehingga pengambil kebijakan perlu mempertimbangkan hal ini untuk perencanaan Kota Surabaya di masa datang. Penelitian ini bertujuan untuk mengetahui gambaran populasi lansia pada masa datang dan mengusulkan perencanaan yang sesuai dengan fenomena yang terjadi. Pendekatan yang digunakan dalam penelitian ini adalah kuantitatif dan kualitatif. Teknik analisis menggunakan metode proyeksi komponen kohort dan analisis konten. Data dikumpulkan dengan survei sekunder dengan mengambil data dari sumber literatur. Didapatkan bahwa pada tahun 2050, penduduk lansia akan mengalami peningkatan drastis yang secara langsung mempengaruhi rasio bergantung tua sehingga perlu mengantisipasi hal ini. Usaha yang dapat dilakukan oleh Pemerintah Kota Surabaya adalah dengan menerapkan konsep Kota Ramah Lansia namun dengan perbaikan yang harus terlebih dahulu dilakukan terhadap beberapa dimensi kota ramah lansia.

Kata Kunci: Proyeksi Komponen Kohort, *Ageing-population*, Kota Ramah Lansia.

I. Introduction

The population is crucial in regional development planning. Population is a resource and a long-term asset; thus, development planning in a region will provide optimal outcomes if stakeholders consider population issues pertinent to their location (Heryanah, 2015).

Alterations in population dynamics can significantly influence numerous aspects of urban environments, including infrastructure, housing, healthcare services, and social and environmental policies (Zhang et al., 2020; Mester, 2018).

The United Nations (UN) (2017) has indicated that Asian nations will encounter an ageing demographic in the forthcoming decades, with the proportion rising from 12% in 2017 to 24% by 2050. Indonesia is included in this trend. In 2019, the percentage of the senior population (aged 65+) rose from 4.5% to 9.6% (Central Bureau of Statistics, 2019) and is anticipated to further increase to 19.8% by 2045 (Central Bureau of Statistics, 2018). This indicates that Indonesia has transitioned to an ageing population structure.

Surabaya City is one of Indonesia's major metropolitan areas and is inextricably linked to the ageing population. The SUPAS 2020 findings indicate that Surabaya City's population has reached 2.87 million, reflecting an increase since 2015. The fraction of the productive age population (aged 15-64 years) declined from 74.00% to 70.31%, while the proportion of the old climbed from 4.71% to 6.47% (Central Statistics Agency of Surabaya City, 2016, 2021). This study intends to forecast the expansion of the older demographic and evaluate urban planning initiatives that can address the ageing population issue in Surabaya City.

The United Nations defines an ageing population as a condition in which the median age of a region's or country's population rises. This growth is related to rising life expectancy and declining fertility rates. This success is evident in various aspects, including reduced infant mortality rates, enhanced access to education, expanded employment opportunities, improved gender equality, effective reproductive health programs, and greater accessibility of health facilities for the broader community. These variables collectively contribute to enhancing life expectancy (UN, 2015). Conversely, an ageing population presents obstacles in delivering essential services for the aged, particularly in healthcare and social security (Sikken et al., 2009).

Data indicates that the old demographic in Surabaya City has consistently risen over the past 23 years, escalating from 92,480 individuals in 2000 to 119,905 in 2010, 193,643 in 2020, and 220,805 in 2023 (Central Statistics Agency of Surabaya City, 2023, 2024). Similarly, life expectancy in Surabaya City has risen to 74.75 years in 2023, exceeding that of other cities in East Java, where the life expectancy is 72.11 years (Central Statistics Agency of East Java Province, 2024), and the national life expectancy stands at 73.93 years (Central Statistics Agency, 2023). Surabaya City was selected as the research site due to its notable pattern of a rising elderly population over the past two decades. Surabaya, the second largest city in

Indonesia and a hub for economics, education, and healthcare in the eastern area, has distinct obstacles in inclusive urban design for its ageing population.

This study's conclusions aim to elucidate the anticipated growth of the older population in Surabaya City, which is crucial for policymakers, urban planners, and health and social service providers. A comprehensive understanding of the demographic proportions in the future can facilitate the development of appropriate infrastructure and services to enhance the quality of life for the elderly in Surabaya. This study can facilitate the anticipation and response to the distinct issues the ageing population encounters, ensuring their needs are addressed effectively and sustainably.

II. Literature Review

Policy for an Age-Friendly City

Inclusive development aims to establish a region that guarantees the welfare of the entire populace. Inclusive development emphasizes social fairness and equitable access to diverse services and opportunities across all societal strata (Ramadhan & Fauzi, 2023). Cities accommodate most people across diverse age demographics and serve as the locale where individuals will reside during their latter years. The increase in the aged population promotes policies centred on their welfare and adopting Age-Friendly Cities (Buffel et al., 2018). The notion of Age-Friendly Cities emerged from the inaugural United Nations (UN) World Assembly on Ageing convened in Vienna in 1982. The forum concluded that an international response to the needs of the elderly is essential, urging governments worldwide to address the myriad concerns impacting their welfare (United Nations (UN), 1983). The WHO advocates for cities and communities to establish systems that address age-friendliness, thereby fostering an inclusive environment that sustainably meets the needs of the aged (Buffel et al., 2018).

The WHO initially proposed age-friendly cities in the early 2000s to enable elderly people to maintain an active lifestyle in their later years (van Hoof et al., 2021). Age-friendly cities are characterized by their capacity to establish inclusive and accessible environments, ensuring that both physical and social infrastructure cater to the requirements of older individuals. Cities that accommodate older individuals must promote healthy and active ageing by enhancing possibilities for health, engagement, and safety while considering the elderly's varied capacities and requirements (World Health Organization, 2007).

Policies and programs to support Age-Friendly Cities necessitate several interventions and measures to enhance elements of the social and physical environment (van Hoof et al.,

2021). World Health Organization (2022a) delineates eight essential components of the Age-Friendly Cities concept through its checklist of necessary features (**Figure 1**), which are:

(1) Outdoor spaces and buildings: Providing secure, hygienic, and readily accessible public areas with attributes such as expansive pedestrian walkways, seating, and sufficient illumination to meet the requirements of the senior demographic.

(2) Transportation: Providing economical, dependable, and accessible public transit alternatives for senior citizens, including low-deck buses, clear signage, and designated seating priorities.

(3) Housing: Ensuring cheap and appropriate housing for elders to reside independently. This encompasses alterations for accessibility, such as ramps, elevators, or handrails, to address physical constraints.

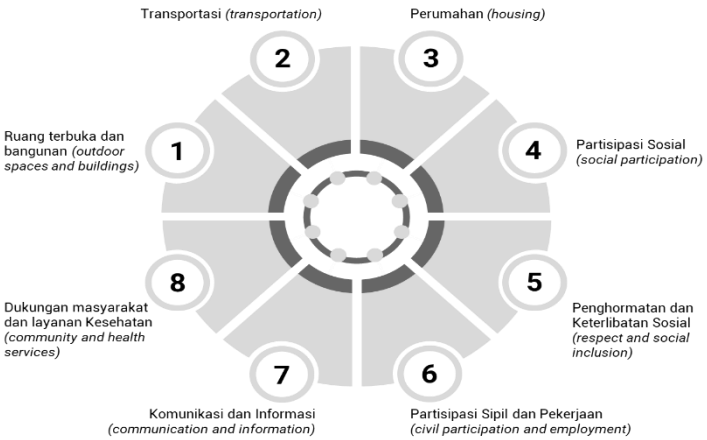
(4) Social Participation: Providing a platform for the elderly to engage in recreational, cultural, and social activities.

(5) Respect and social inclusion: Promoting attitudes and behaviours that respect and include older people in decision-making processes.

(6) Civic involvement and employment: Assisting the elderly in maintaining their work, volunteerism, or other community activities to ensure continued activity and societal involvement.

(7) Communication and Information: Ensuring that elders may obtain information about community services and events through diverse formats.

(8) Community and Health Services: Providing access to affordable, high-quality health services, community support, and long-term care facilities to address the physical and mental health requirements of elderly people.



Source: World Health Organization (2022a)

Figure 1. Model of Age-Friendly Cities WHO

The WHO Global Network for Age-Friendly Cities and Communities (GNAFCC) currently encompasses 1,606 cities and communities in 53 countries, representing over 330 million individuals globally (World Health Organization, 2024). Hong Kong, a heavily populated and compact region, has adopted this approach. The proportion of old individuals in Hong Kong has surged significantly over the past 30 years due to demographic ageing, rendering it one of the regions with the lowest fertility rates globally. Some obstacles must be overcome to accomplish the goals mentioned in the Age-Friendly Cities and Communities (AFCC) pledge. These obstacles include the considerable elderly population and the predicted rise in their proportion. Before the WHO initiative, Hong Kong formed the Commission for the Elderly in 1997 to formulate policies, coordinate planning and development, and monitor and evaluate programs for the elderly. Subsequently, numerous Age-Friendly Cities projects were implemented, encompassing the education, housing, infrastructure, and healthcare sectors. In August 2017, eleven districts in Hong Kong pledged to participate in the AFCC and received WHO acknowledgement by being included on the AFCC community list (Buffel et al., 2018).

Next to Hong Kong, the Berlin Department of Health and Social Affairs has established guidelines for ageing policy in Berlin (Leitlinien Berliner Seniorenpolitik) (Senatsverwaltung für Gesundheit und Soziales Berlin, 2013), which were enacted in 2013, superseding the original guidelines from 2006. The guidelines encourage initiatives across all departments of the City of Berlin to foster an Age-Friendly City. The recommendations are a local policy initiative akin to the WHO Age-Friendly City criteria, despite Berlin's non-membership in the GNAFCC. The Berlin Ageing Policy Guidelines comprise 17 chapters addressing housing, mobility, and poverty among the elderly. The chapter on housing delineates the adaption of age-friendly housing provisions, enabling older individuals to reside independently in more accessible accommodations.

Furthermore, housing is designed to facilitate the daily activities of individuals with low resources or disabilities. The mobility chapter emphasizes the provision of accessible infrastructure and public areas, particularly considering the needs of older individuals. The poverty chapter elucidates that low-income senior individuals are urged to maintain their engagement in social and cultural activities. The execution of these principles is overseen by a working group of representatives from multiple local government departments and the local Senior Citizens Advisory Council (Landesseniorenbeirat) (Buffel et al., 2018).

Ageing Population

The ageing population is a phenomenon characterized by a growth in the proportion of individuals aged 65 years and older within the demographic composition of an area or country (UN, 2015; Wang et al., 2024). This phenomenon is attributed to two primary factors: rising life expectancy and declining birth rates. This transition leads to an elevated dependence ratio, indicating a more significant number of retirees relative to the working-age population, which may have considerable economic and social consequences, including heightened demand for healthcare services and social security (Park, 2024).

The ageing population signifies advancements in social and economic development, alongside enhancements in healthcare systems, even in emerging nations where fertility and death rates have decreased despite sluggish economic growth. Decreases in child mortality, enhanced access to education, family planning initiatives, and advancements in gender equality have facilitated reduced birth rates. An ageing population necessitates policies to promote healthy ageing, address the growing healthcare and social services demand, and mitigate socioeconomic inequities. Facilitating the active engagement of older individuals in their communities is crucial to mitigate adverse effects and enhance the advantages associated with ageing (Stoodley & Conroy, 2024).

Population Projection

In development planning across several sectors, data regarding population conditions, including quantity, distribution, and age composition, is crucial. A population forecast is required to estimate the quantity and composition of the population based on the three primary components of population growth: births, deaths, and migration. These three elements dictate the future size and composition of the population. Population predictions are essential in the development planning process, as every economic and social development plan necessitates information regarding the future population's size and characteristics. The cohort component model is an analytical framework for population projections that accounts for fertility, mortality, and migration (Suharto, 2020). The predominant application of the component technique categorizes the population by age and gender or by race and ethnicity (Smith et al., 2002). Effective development planning necessitates understanding population forecasts, which encompass not only the future size and composition of the population but also the allocation of the economic burden among the working-age demographic.

The dependency ratio (DR) is a significant demographic indicator that offers a general overview of a nation's economic state. The dependency ratio indicates the fraction of the

population reliant on the working-age population. A more significant dependency ratio percentage indicates a greater financial burden on the working-age population to support those who are non-productive or no longer productive. A low dependency ratio signifies a reduced obligation for the working population to support the dependent demographic. A higher population growth rate correlates with a larger share of non-productive youth (ages 0-14) within the total population, increasing the burden on the productive age demographic (Panggabean, 2020; Rohana et al., 2017).

The population projection in year n can be calculated using the following formula (BPS, 2010):

$$P_n = P_o + (L - M) + (IM - OM) \qquad (1)$$

Which:

P_n = population in year n

P_o = population in base year

L = number of births

M = number of deaths

IM = number of in-migration

OM = number of out-migration

Fertility or birth refers to the emergence of a population concerning the number of live births (Suharto, 2020). Fertility is shaped by various biological, social, psychological, economic, and cultural factors (Smith et al., 2002). Biological factors encompass the capacity to conceive, whereas social, psychological, economic, and cultural factors shape decisions about the wish to have children, the preferred number of children, and the timing of childbirth (Smith et al., 2002). Furthermore, government policies concerning contraception usage can influence the fertility aspect (Suharto, 2020). The fertility aspect of the component method necessitates information on births per female age group (ASFR) and the total birth rate (TFR) (Rowland, 2010). ASFR is calculated by dividing the number of births in an age group by 1000 women, formulated in equation 1. TFR is calculated by adding the fertility rate of women by age (ASFR), explained in equation 2 (Smith et al., 2002).

$$ASFR = \frac{Bi}{Pfi}\ x\ k \qquad (2)$$

which:

Bi = number of births to women in the age group I in a given year

Pfi = number of the female population in the age group I in the middle of the same year

i = age group

k = constant number (1000)

When age groups are grouped into 5-year intervals, the TFR is calculated by multiplying the sum of the ASFRs by five (Smith et al., 2002), as in equation 3.

$$TFR = 5 \sum ASFR \quad (3)$$

Mortality or death is a significant factor in population calculations reducing, the population (Suharto, 2020). Factors influencing mortality in a region may include disease, accidents, conflict, or homicide (Suharto, 2020). Mortality is typically assessed by counting the number of deaths within a population over a specific time frame, usually one year (Smith et al., 2002). Mortality is determined by estimating how many individuals will survive to the next component or age group in the projection year to calculate the population projection using the component method. This is done by multiplying the number of individuals in the current age group by the survival rate (Smith et al., 2002). The survival rate value is reflected in the Coale-Demeney West model life table, following BPS recommendations for population projections in Indonesia (BPS, 2011).

Migration refers to the lasting relocation of individuals from one administrative region to another. Elements that affect migration include income, unemployment rates, living expenses, and regional amenities (Smith et al., 2002).

III. Research Methodologies

This research employs a qualitative methodology to explore the phenomenon of population ageing and its effects on the planning of Surabaya City. A qualitative approach serves as a means to explore and comprehend the significance attributed by individuals or groups to social or humanitarian issues (Creswell & Creswell, 2018). In order to meet the research objectives, this study employs population projection techniques and content analysis techniques.

The elderly population growth projection was conducted to assess the anticipated risk of rising old dependency ratios in Surabaya. The policy strategy for developing an elderly-friendly city will be formulated based on the spatial requirements of the elderly. The cohort component method is employed for population projection. The data required to project the growth of the elderly population includes the population of Surabaya by gender and age group for the years 2015 and 2020, the number of births in Surabaya for the same years, the Age Specific Fertility Rate (ASFR) for 2020, life tables for both women and men and migration

data for residents who moved to and from Surabaya in 2015. The 2015 ASFR data for Surabaya was unavailable; therefore, the ASFR was estimated based on the 2020 ASFR value derived from the 2020 SUSENAS data, as illustrated in Figure 2.

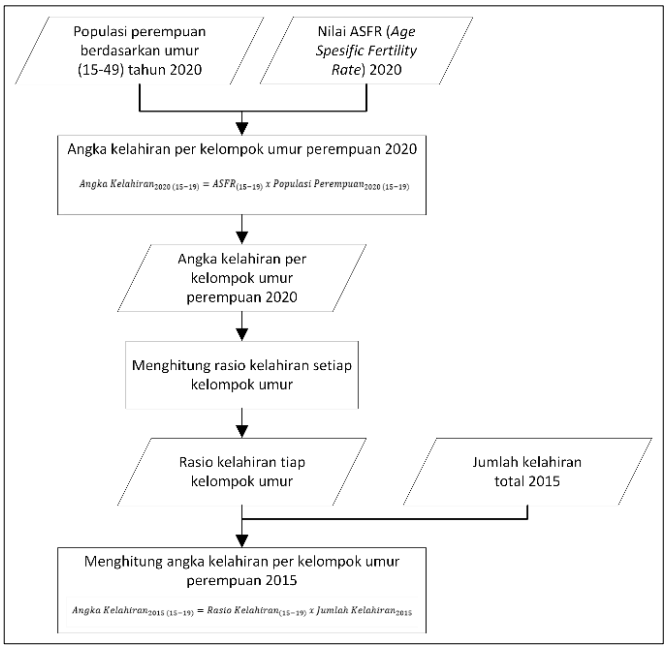


Figure Resource: Researcher (2023)

Figure 2. Birth Rate Calculation Flow in 2015

Following determining the elderly population ratio in Surabaya City's population projection until 2050, a study was undertaken to assess the city's alignment with the elderly-friendly city dimensions established by the World Health Organization (2022a) through content analysis techniques. Content analysis approaches are comprehensive ways of examining text, focusing on the essence of the discourse to interpret specific information. The procedures in content analysis involve defining the observable phenomena, determining the units of study, and articulating the results (Kriekhoff, 1995). The data utilized in the content analysis comprises secondary data from each aspect of an age-friendly city. The data utilized include news articles, information from the Surabaya City Government portal, and prior research studies. Furthermore, planning antecedents from cities that have established elderly-friendly environments are utilized as proposals for establishing such cities in Surabaya based on previously analyzed situations.

IV. Result and Discussion

The results section is bifurcated into two parts: the population projection outcomes for Surabaya City and their implications for urban planning in Surabaya City. The population projection findings analyze the demographic factors and the percentage of the senior population. Additionally, the ramifications for urban planning in Surabaya City will be examined, particularly concerning the senior demographic.

1. Population Projections

Figure 3 illustrates the alterations in the population pyramid of Surabaya City from 2015 to 2050. In 2015 and 2020, the data illustrates an extended pyramid structure characterized by a higher number of births than deaths, indicating that the population of the unproductive age group surpasses that of the old population. By 2030, the population pyramid will assume a stable form, marked by a parity between the unproductive age demographic and the old population. In 2050, the population pyramid will exhibit a tombstone shape (constructive). This pyramid structure is defined by a limited youth demographic and a low birth rate, resulting in minimal population growth, nearing 0 or even negative values. (Suharto, 2020).

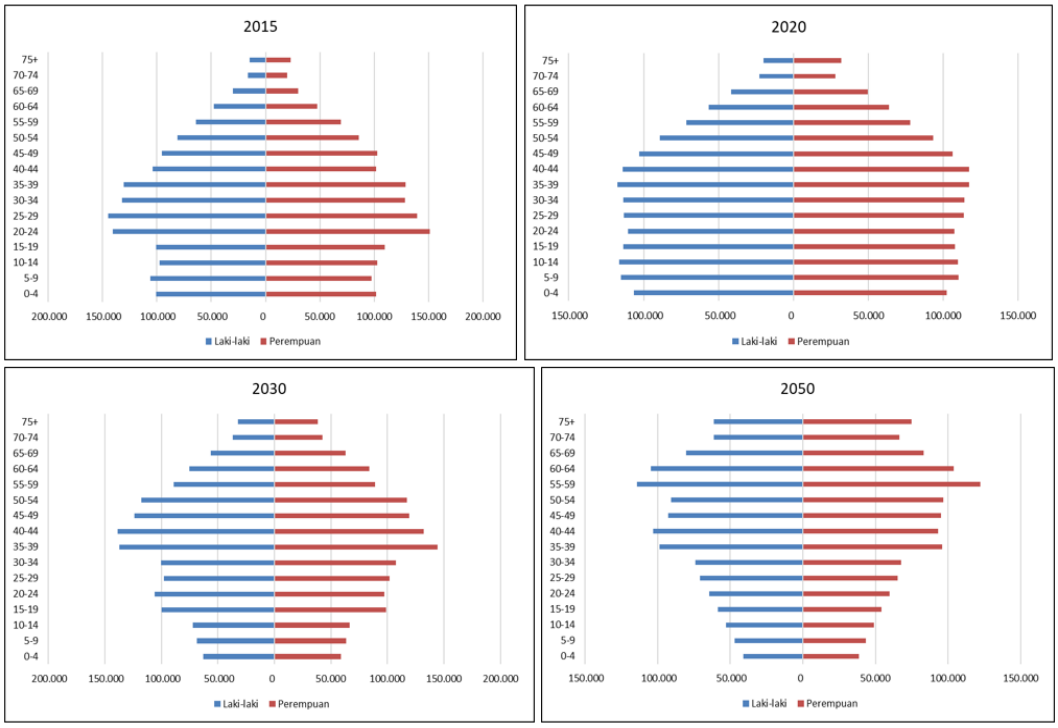


Figure Source: Statistics of Surabaya City (2016) & Analysis of Researcher (2023)

Figure 3. Surabaya City Population Pyramid during 2015 – 2050

Table 1. Population Projection of Surabaya City until 2050

Age Group	2015	2020	2030	2040	2050
0-4	201.894	139.651	122.035	101.086	79.455
5-9	203.287	197.717	132.145	109.641	90.314
10-14	200.410	203.843	138.945	122.125	102.122
15-19	210.467	200.592	198.542	134.573	12.610
20-24	291.805	209.526	203.213	140.322	124.023
25-29	284.345	289.325	199.424	197.479	136.101
30-34	259.975	281.183	207.581	201.645	141.683
35-39	259.083	256.071	281.311	196.224	194.412
40-44	205.478	53.731	270.721	201.662	196.160
45-49	198.162	199.513	242.920	266.240	187.606
50-54	166.663	189.661	234.477	249.798	187.490
55-59	133.296	155.906	178.214	215.942	236.313
60-64	95.011	20.250	159.226	195.823	208.310
65-69	59.788	80.937	119.030	135.567	163.669
70-74	36.341	46.612	79.194	104.354	127.789
75+	37.755	44.636	71.022	108.832	136.218
Total	**2.843.760**	**2.869.156**	**2.838.002**	**2.681.313**	**2.424.275**

Source: Analysis of Researcher (2023)

Table 2. Population Proportion Projection 2020 – 2050

Year	2015	2020	2030	2040	2050
Non-Productive Age	21,30	18,86	13,85	12,41	11,22
Productive Age	74,00	75,14	76,66	74,58	71,14
Elderly	4,71	6,00	9,49	13,01	17,64

Note: in %

Source: Analysis of Researcher (2023)

Table 1 presents the outcomes of the population forecast for Surabaya City from 2015 to 2050. The comparison of the 2020 projection findings with the actual 2020 data revealed an error rate of 0.16 for the female population prediction and 0.20 for the male population projection. The projected results indicate that Surabaya City's population will reach its maximum increase of 2,870,196 individuals in 2025. Subsequently, in the ensuing year, the

population will diminish to 2,424,275 individuals by 2050. The declining population in the 0-4 year age group since 2020 is attributable to the low birth rate. Table 2 indicates a continuous drop in the proportion of the non-productive age group (<15 years) from 21.30% in 2015 to approximately 11.22% in 2050. This illustrates the effect of the Family Planning program's success, initiated in the 1970s to regulate Indonesia's population. Conversely, the percentage of the senior population is projected to rise from 4.71% in 2015 to 17.64% by 2050. This ratio indicates that Surabaya's population has been ageing since 2015 and will persist until 2050.

Table 3. Dependency Ratio 2020 – 2050

Type	2015	2020	2030	2040	2050
Dependency Ratio	35,14	33,09	30,45	34,09	40,56
Old Dependency Ratio	6,36	7,99	12,38	17,44	24,80
Young Dependency Ratio	28,78	25,11	18,07	16,64	15,76

Note: in %

Source: Analysis of Researcher (2023)

Table 3 presents the projected dependency ratio of the City of Surabaya, which has experienced a decline followed by an increase. By 2030, the City of Surabaya will exhibit the lowest dependency ratio at 30.45%, which will subsequently rise by 10% to a figure of 40.56% by 2050. The growth in the older population fraction directly contributes to the rise in the old dependency ratio. The ratio is determined by dividing the population of elderly individuals by the population of those in the productive age group. The old dependency ratio has risen threefold from 7.99 in 2020 to 24.80 in 2050. By 2050, 4 to 5 adults of productive age will support each elderly person. The elevated dependency ratio of the elderly population can impede economic growth in certain regions (Santacreu, 2016), consequently exacerbating the strain on the healthcare system due to heightened demand for medical services (Cristea et al., 2020), as well as necessitating enhanced essential services to support elderly activities, including housing, transportation, and accessible public spaces (World Health Organization, 2007).

2. Implications for Future Planning

It is essential to implement strategies that alleviate the burden on the working-age group to mitigate the risk of an increasing dependency ratio among the elderly population. One practical approach is the development of Age-Friendly Cities, which provide guidelines for fostering active ageing. This concept emphasizes optimizing health opportunities, participation, and security to enhance the overall quality of life. An elderly-friendly city

modifies its structure and services to ensure inclusive access for the elderly, tailored to their needs and capacities (World Health Organization, 2007). The assessment can be conducted by addressing the eight dimensions of an Elderly Friendly City outlined by the World Health Organization, (2022a). In 2013, the City of Surabaya was deemed to have not met the standards established by the WHO for an Elderly Friendly City (SurveyMETER & CAS UI, 2013). Among the eight dimensions, housing, transportation, civil participation and employment exhibit low values that necessitate focused attention in the planning of Surabaya City.

The housing dimension indicates a deficiency in the availability of affordable housing options tailored to the needs of the elderly. The Surabaya City Government is addressing this issue by establishing a nursing home to accommodate elderly individuals who lack family support and are from economically disadvantaged backgrounds. Currently, two nursing homes are in Sukomanunggal and Jambangan (Mubyarsah, 2022). Given the anticipated growth of the elderly population, the Surabaya City Government must prepare new facilities to accommodate this demographic. The Surabaya City Government should implement an affordable housing program or designated flats for elderly individuals who can live independently, similar to the initiative in Ostrow Wielkopolski, Poland. The Ostrow Wielkopolski City Government offers residential units for the elderly, with maintenance expenses covered by the city administration. Furthermore, the elderly will receive benefits including security personnel and psychological support (World Health Organization, 2022b).

In the transportation dimension, an assessment indicator includes the availability of accessible public transportation, the presence of priority seats, and the ease of obtaining information. The Surabaya City Government has implemented the Suroboyo Bus and Wirawiri as public transportation options for residents' daily activities. The Suroboyo Bus fleet includes priority seating designated for the elderly, pregnant women, and individuals with disabilities, featuring a low deck entrance to enhance accessibility for older passengers (Pemerintah Kota Surabaya, 2018). Wirawiri serves as a feeder transportation system for the Suroboyo Bus (Salman & Kurniati, 2023). The average waiting time for the Suroboyo Bus at various stops is 48 minutes, significantly exceeding the service standard set by the Ministry of Transportation, which is 15 minutes (Sholahuddin, 2022). Furthermore, information regarding routes and disruptions is exclusively disseminated via social media and the Go-bis application, potentially hindering access for elderly users seeking information. Improving service quality regarding waiting times is essential to facilitate the movement of residents, particularly the elderly. Additionally, providing written information or running text and operators at each stop will enhance user accessibility.

Source: Salman & Kurniati (2023)

Figure 4. Interior of Suroboyo Bus and Wirawiri Suroboyo with priority seats (in pink colour)

The social participation dimension includes indicators of employment or training opportunities available to the elderly. Individuals in the elderly demographic who generate income can alleviate the economic pressure on the working-age population. The evaluation relies on the accessibility of training programs or employment opportunities and the relevant supporting policies. The elderly perceive that present employment opportunities predominantly benefit younger individuals, resulting in limited activities available for older adults (SurveyMETER & CAS UI, 2013). Inclusive development underscores the necessity of giving everyone equal access to welfare opportunities, including securing decent employment irrespective of age (Kartiwi et al., 2022). The Surabaya City Government has initiated the Resilient Elderly School (Selantang) program to enhance knowledge and skills, including reading and writing, among the elderly, thereby improving their productivity (Asmoro, 2024).

The Surabaya City Government, through the Social Service, established Karang Werdha as a forum for the fostering and empowerment of the elderly at the sub-district and village levels. Karang Werdha engages in activities such as arts and culture training, as well as religious instruction (Vibriyanti, 2018). Currently, no training programs or policies are in place to assist the elderly in obtaining formal employment and generating income to support their livelihoods. This results in the elderly relying on their families for support. The Surabaya City Government in Indonesia can implement programs to assist elderly individuals seeking employment, similar to initiatives by the Singapore Ministry of Manpower. This support program involves training the elderly and providing job search services (Workforce Singapore, 2023).

V. Conclusion

In the future, Surabaya City's population structure is expected to shift towards an ageing demographic due to enhancements in health services, resulting in increased life expectancy. Population projections indicate that the elderly population will increase fourfold, resulting in an elderly dependency ratio of 24.80% by 2050. The significant proportion of the elderly population and the elevated elderly dependency ratio can lead to various issues, including a deceleration of economic growth, heightened pressure on the healthcare system, and an increased demand for essential services for the elderly demographic. The Surabaya City Government must account for the growth of the elderly population in its planning efforts.

Implementing the Elderly Friendly City concept, as developed by the WHO, represents a significant effort to engage the elderly in the planning process. Among the eight dimensions, Surabaya City exhibits the lowest scores in housing, transportation, and civil participation/employment. The Surabaya City Government can enhance support for the elderly by increasing the availability of nursing homes and low-cost housing assistance programs, expanding the Suroboyo Bus fleet to minimize waiting times and improve access to information, and implementing specialized workforce preparation programs for elderly individuals who are capable and willing to work. Implementing this will enable the elderly population in Surabaya City to engage in activities independently and contribute to the city's economy.

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